

Serial Nr.: 10/644,946  
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AMENDMENTS TO THE SPECIFICATION:

**Page 1, amend paragraph [0002] as:**

[0002] In the considerations of reducing the weight of a vehicle body and promoting its control and appearance, a vehicle wheel rim is mostly manufactured by using aluminum alloy material now. Although a conventional method can manufacture a superior performance and appearance of aluminum wheel rim, it still exists has some defects. For example the strength thereof cannot be further increased, the manufacturing processes thereof are too complicate, and the manufacturing cost thereof cannot be reduced. Three conventional methods for manufacturing an aluminum wheel rim and the defects thereof in reference to the accompanying drawings are described as the followings.

**Page 1, amend paragraph [0003] as:**

[0003] Figure 1 shows a first conventional gravity casting method for manufacturing an aluminum wheel rim. A wheel-rim-shaped mold cavity A1 is pre-designed in a foundry mold A. Then a melting aluminum alloy is poured into the mold cavity A1. After being cooled, the casting is taken out from the mold A and is processed through a heat treatment and machining procedures to form a wheel rim. However using a foundry mold to manufacture a wheel rim, it easily produces sand holes due to the melting aluminum alloy containing airs. When it is mounted to a wheel tire, a leak will occur. In addition, due to micron sand holes, it is hard to manufacture a wheel rim with chromate

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treatment to meet market requirements. That further results in a drawback of high manufacturing cost of wheel rim with chromate treatment.

**Page 2, amend paragraph [0005] as:**

[0005] Figure 3 shows a third conventional spinning method for manufacturing an aluminum wheel rim, which first manufactures two wheel rim parts and then mounts them together using fixing devices. Firstly, two different sizes of aluminum alloy plates C are respectively spun into a first wheel rim part C1 and a second wheel rim part C2. The first wheel rim part C1 and the second wheel rim part C2 are then jointed together through a wheel disc, bolts and nuts. However the third method needs two times of spinning, drilling and jointing procedures. Therefore the manufacturing time thereof cannot be further reduced. The condition of ~~a leak~~ being leaky or even ~~[[a]]~~ loose of the wheel rim may occur due to vibration in the movement of vehicles. And the strength thereof is weaker than that of a wheel rim manufactured by the present invention.

**Page 2, amend paragraph [0007] as:**

[0007] The present invention is to solve the problem defects that a wheel rim manufactured by conventional methods has a higher manufacturing cost, the strength thereof cannot be further increased and the weight thereof is heavier.

**Page 3, amend paragraph [0012]-[0014] as:**

[0012] Figure 1 is a schematic diagram showing a manufacturing process of a conventional gravity casting method for manufacturing a wheel rim and the structure thereof.

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**[0013]** Figure 2 is a schematic diagram showing a manufacturing process of a conventional welding and spinning method for manufacturing a wheel rim and the structure thereof.

**[0013]** Figure 3 is a schematic diagram showing a manufacturing process of a conventional spinning method for manufacturing a wheel rim, which first manufactures two wheel rim parts and then ~~[[joint]]~~ joints them together by a wheel disc in combination with bolts and nuts.

**[0014]** Figure 4 is a schematic diagram showing a manufacturing process of a method for manufacturing a wheel rim and the structure thereof in accordance with the present invention.

**Page 4, amend paragraph [0020] as:**

**[0020]** The detailed shaping steps are further described as the followings. As shown in Figures ~~1(a)-(d)~~ 4(a)-(d), an aluminum-plate (material No. 6061) with a thickness 6-7 mm is selected as a work. It is pre-cut into a circular plate 1. The circular plate 1 is shaped into a cup-shaped embryo body 1A by a deep drawing die 2, wherein an end of the embryo body 1A is shaped into a cup-shaped cylinder 1A2 and the other end thereof is an embryo expansion part 1A1. The diameter of the embryo expansion part 1A1 is greater than that of the cylinder 1A2. The bottom surface of the embryo body 1A is then punched out by a punch press to form a hollow cylinder. The embryo expansion part 1A1 is not a final expansion part of a wheel rim but a pre-shape similar to a continuous die.

**Pages 4-5, amend paragraph [0021] as:**

**[0021]** The expanding-pressing female die 3 ~~is a die being able to~~ can be opened in lateral direction. Both ends of the die cavity of the expanding-pressing female die 3 are

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~~penetrated through each other~~ open and respectively ~~[[forms]]~~ form a first expanding die cavity 31 and a second expanding die cavity 32 (refer to Figure ~~[[1(d)]]~~ 4(d)). The shaping process comprises that the cylinder 1A2 of the embryo body 1A is inserted from the first expanding die cavity 31 into the second expanding die cavity 32 (referring to Figure ~~4(e)~~ 4(e)); a first expanding-pressing male die 4 is extruded by an oil pressure machine into the expanding-pressing female die 3 downwards to make the embryo expansion part 1A1 further be shaped into a final first expansion part 1B1 (referring to Figure ~~4(f)~~ 4(f)); next, the embryo body 1A is turned over 180 degrees to make the hollow cylinder 1A2 upwards; a second expanding-pressing male die 4A is extruded by an oil pressure machine into the expanding-pressing female die 3 downwards to make the hollow cylinder 1A2 be shaped into a second expansion part 1B2 (referring to Figure ~~4(g)~~ 4(g)); and after opening the expanding-pressing female die 3, a shaped wheel rim 1B (refer to Figure ~~4(h)~~ 4(h)) is taken out. In order for view that the wheel rim 1B ~~[[can]]~~ to operate after it is mounted to a wheel seat of a vehicle, ~~therefore it~~ the wheel rim should be mounted with a wheel disc 1B3 that is mounted to the wheel seat of the vehicle. The wheel disc is not a subject matter ~~an appealed key point~~ of the present invention. Therefore it is not described here.